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Beirut, 3-8 March 1975

CANNED FRUITS AND VEGETABLE PRODUCTS INDUSTRY IN LEBANON[1/]

by

Raja Tannous*

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* Associate Professor of Food Technology and Nutrition
American University of Beirut

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Beirut, Lebanon, 2 - 8 March 1975

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Introduction:

The canning of fruits and vegetables is perhaps the oldest major food processing industry in Lebanon, and is still one of the major sectors in the industry. Traditionally, a wide variety of fruits and vegetables were and still are preserved on a small scale in villages using traditional methods. Today, however there are several plants that process fruits and vegetables on a large industrial scale, using modern equipments and installation.

In Lebanon, the fruit and vegetable processing industry is varied and utilizes many fruits and vegetables. Some of the major products produced locally in this sector are the following:

1. Pickled vegetables: (Mainly Cucumber, Eggplants, mixed vegetables.)

2. Canned vegetables: (A wide variety exists).

3. Canned fruits in syrup: (Mainly peaches, apricots, pears).

4. Jams , Marmalades, and preserves: (Mainly apricots, strawberries, quince and to a lesser extent cherry).

5. Fruit juices and drinks (A wide variety exists, including apple, orange, lemon, pine apple, and tomato).

In addition to the categories mentioned above, a large portion of the vegetable and fruit canning industry in Lebanon processes legume seeds such as chickpeas and broadbeans.

Because of the wide variety of raw materials and products processed, this report will consider the industry as a whole giving details on individual products wherever possible and feasible.

I. Raw Materials:

Generally most of the raw materials needed for this industry are locally available except for few items that are imported. An example of an imported vegetable is peas.

Fruits for jams, preserves and for canning in syrup are purchased locally. However, for the fruit juice industry, it must be realized that the general practice is to import fruit concentrate bases, which are reconstituted, pasteurized and then canned at the local plants. Pineapple and mango juice concentrates are two illustrative examples.

With regard to the raw materials for this industry, the unavailability of the proper varieties of fruits and vegetables in sufficient amounts at low enough prices are the problems that the manufacturers face. This will be discussed in more details later in the report.

II. Production and Processing:

A. Description of existing industry:

History: The industry of fruits and vegetables processing in Lebanon started about four decades ago, with one large factory until two decades ago. At present these plants count at least nine in number. Several of these plants process fruits and vegetables on a large scale using modern methods and equipments.

Location: The locations of the factories are mostly in Beirut and its suburbs, with two plants in the Beqa'a Valley.

Capacity & Production: As to the capacity of production, plants processing fruit juices are generally operating below their full capacity. The main reason for this is the unavailability of new materials throughout the season.

Data collected by interviews for five plants processing fruit juices including citrus, tomato, apples and other fruits had a total capacity of 21,822 tons of fruits while their actual production was 4,849 tons, during 1971.

On the other hand in the plants which produce canned vegetables in brines and fruits in syrup, a bottle neck in production exist mainly on the processing line from the difference in capacities between sealing machines and retorts, which are major processes in the canning factories.

Level of Technology: In this industry, the level of technology varies widely from one factory to the other. Some factories still maintain old and classical procedures and equipments, while some factories do possess the most modern equipment. However, it should be mentioned that modern equipment does not mean that the best technical procedures are followed, nor does it mean that the best quality products are produced by these plants.

One of the reasons for this is the lack of the local technicaly trained experts at these plants who should monitor production on the day-to-day basis in order that good products with standard quality are produced. Foreign consultants are available at times to solve problems; however, because of the lack of continuity in expertise technology, problems are not tackled efficiently and properly.

Quality control facilities again varies from one factory to the other. Some factories have up to date facilities are using them properly in standardizing the quality of their products. Others have good facilities without making any use of the,while still others have poor facilities to start with.

Considering the suitability of the existing plants for expansion, it can be said that several of these plants have layouts that are suitable for expansion, while others, particularly those located in the Beirut area, are restricted in available space.

B. Problems facing the existing plants:

Many of the problems facing the Lebanese food industry in general also face the plants that process fruits and vegetables. However, some of the following problems are of particular importance to this industry:

(1) Lack of proper variation of fruits and vegetables:-

Most of the fruits and vegetables grown in Lebanon are geared to be sold fresh and no consideration is given to their suitability for processing; and whether they have the specific characteristics, such as heat resistance, texture and color that are required for processing.

(2) High cost of raw materials:-

This is related to No. (1) since all these crops are intended for the fresh retail market, their prices are usually too high for the processing industry compared with prices in other industrial countries. In most cases the industry cannot make predictions about next season's prices.

(3) Unavailability of suitable raw materials:-

What is meant here is that, because these crops are intended to be sold for the retail market, the processor is compelled to collect his raw materials from different locations obtaining different varieties and qualities.

(4) Lack of Standardized quality products.-

Due to the difficulties met with the availability of suitable raw materials, the processed products manufactured lack standardization as to quality factors such as size texture, color and other qualities.

III. Final Products

Brief Description of Products

The major products prepared locally include the following as mentioned before:

a. Pickled vegetables
b. Canned vegetables
c. Fruits in syrup
d. Jams
e. Fruit juices and drinks.

The following is a short description of each of these products.

Pickled vegetables: include mainly pickled cucumbers, mixed vegetables, olives. These are packed in tin cans or glass jars. The quality varies from one brand to the other and range from poor to good. All vegetables are pickled in vinegar, while olives are pickled in brine and lemon juice.

Canned vegetables: include mainly products such as peas, artichoke, green beans, okra and others in brine. Tomato paste is another major canned product. All these products are canned in tin cans, with few products recently appearing on the market packed in glass jars. The quality of these products is generally fair, and could be improved.

Fruits in syrup: are produced on a smaller scale, which may be due to the small demand for these products. These products include mostly peaches and pears in syrup. The quality of these products is fairly good. Fruit cocktails are not produced to any great extent locally.

Jams, marmalades and preserves: are produced on a large scale in Lebanon. These include mainly:

a. Strawberry, apricot and quince jams.
b. Orange marmalades
c. Strawberry preserves.

The quality of these jams is generally very good, some of which can be considered as excellent. Jams are generally canned in tin cans, but recently more products are packed in glass jars, particularly preserves. The lack of a standard texture and consistency is sometimes the major problem with locally prepared jams.

Fruit juices: The juices that are produced in Lebanon include natural juices as well as artificial drinks. The fruit juice industry consists mainly of reconstituting imported fruit juice concentrates. In some products, concentrates are reconstituted to original juice composition, and in other products they are further diluted to become a juice drink, and some products are made completely by mixing chemical ingredients. The big fallacy here is that all of the above products are marketed as fruit juices. Such products, including pineapple, mango, orange, and grapefruit juice and mango nectar are produced by several factories.

These juices are packed either in tin cans of different sizes, or in 'tetra-paks'. Several factories have such facilities and requirements for reconstituting, pasteurizing, sterilizing and canning the juice. As far as juice extraction from fresh fruits, at least one factory has modern equipment and facilities for juice extraction and concentration. However, it is not known how much of this juice or concentrate is used for preparing the local products, and for a time all the juice concentrates produced locally were exported.

There is an urgent need for the standardization of these products that are produced locally.

Trends during the last few years:

To obtain an idea about the trends in volume of production, local consumption and export of the major fruits and vegetable products produced in Lebanon, the attached tables show the available data for the period 1970 - 1973.

It should be mentioned that production values do not account for the combined values of consumption and export, because part of the consumption values are based on imports of the particular product.

It can be observed from Table 1. that production of canned beans, olives, jams and canned vegetables have increased appreciably during the four year period. Similarly their consumption and export values increased. It must be mentioned that exports of jams and canned beans increased more than three folds, while their consumption did not increase in this order. This means that a great part of the increase in production is going into exports.

Considering the pickles industry, the values show a sharp drop in production up until 1973. This however, has changed drastically since 1973 where a new factory for processing pickled started operating and had a production of over 100 tons of pickles in one season.

Again, a sharp decrease in tomato paste production is observed, which is mainly due to unavailability of tomatoes for processing at low enough prices. The reason for the sharp decrease in consumption of tomato paste, however, is not clear.

In general it can be concluded that a gradual increase in production and export has been the trend in most of the canned fruits and vegetable products.

Table 1. The production, local consumption and export of major fruits vegetable products in Lebanon.

JAMS

	1970	1971	1972	1973
Production (tons)	1029.1	1196.7	1145.9	1463.3
Local Consumption (tons)	948.3	801.6	971.7	1224.2
Export (tons)	118.1	168.5	362.9	409.2

CANNED VEGETABLES

	1970	1971	1972	1973
Production (tons)	382.1	673.3	1000.3	869.7
Local Consumption (tons)	421.9	551.5	556.9	646.1
Export (tons)	203.6	155.8	179.2	356.9

TOMATO PASTE

	1970	1971	1972	1973
Production (tons)	353.7	655.1	473.2	215.9
Local Consumption (tons)	747.0	643.2	543.7	314.4
Export (tons)	6.0	3.6	12.2	13.5

CANNED BEANS

	1970	1971	1972	1973
Production (tons)	299.2	579.2	513.4	740.6
Local Consumption (tons)	205.4	281.6	305.3	410.1
Export (tons)	112.2	278.3	177.3	331.9

PICKLES

	1970	1971	1972	1973
Production (tons)	44.0	67.0	15.2	4.8
Local Consumption (tons)	58.7	43.0	47.3	6.3
Export (tons)	5.8	1.7	1.2	1.2

PICKLED OLIVES

	1970	1971	1972	1973
Production (tons	3.3	-	1.1	27.7
Local Consumption (tons)	5.7	2.2	1.2	3.08
Export (tons)	-	-	-	-

Reference: Ministre du Plan, Direction Centrale de la Statistique, Bulletine Statistique Mensuel (Liban).